

REMARKS

Claims 38-74 are currently pending in the present application. Claims 1-37 are cancelled and new claims 38-74 are added.

The Office Action objected to the numbering of claims under 37 CFR 1.126. In the original application, there were two different claims numbered "3" and no claim numbered "12", i.e., there was a claim numbered "11" immediately followed by a claim numbered "13". Applicant traverses this objection by canceling original claims 1-37 and presented the original claims renumbered as new claims 38-74 with updated dependencies. The following table shows the renumbering.

<u>Old No.</u>	<u>New No.</u>	<u>Old No.</u>	<u>New No.</u>	<u>Old No.</u>	<u>New No.</u>
1	38	14	51	27	64
2	39	15	52	28	65
3	40	16	53	29	66
3	41	17	54	30	67
4	42	18	55	31	68
5	43	19	56	32	69
6	44	20	57	33	70
7	45	21	58	34	71
8	46	22	59	35	72
9	47	23	60	36	73
10	48	24	61	37	74
11	49	25	62		
13	50	26	63		

The Office Action rejected claims 1-7, 9-13, 15, 20-23, 26, 28, 33-35, and 37 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,095,277 to Bluethman et al. ("Bluethman") in view of U.S. Patent No. 5,659,801 to Kopsaftis ("Kopsaftis").

Applicant traverses these rejections for the corresponding new claims, because the combination of Bluethman and Kopsaftis does not teach each and every element of the claims. (Note that the Office Action rejected the claims as if original claims 1, 2, 3, 3, and 4-11 were correctly numbered from 1-12.)

In regard to claim 38 (original claim 1), Bluethman teaches only examples of general print commands rather than microcode commands. (Bluethman, col. 4, lines 63-67 and col. 5, lines 1-9). Claim 38 recites, *inter alia*, "embedding a microcode update file as a module in a print job file". The claimed "microcode update file" is not the same as the general print commands in Bluethman. Applicant has carefully reviewed Bluethman and cannot find any reference to any update file. Bluethman only teaches changing general high-level commands for the printer. (Bluethman, col. 9, lines 24-32). Applicant does not see how changing the commands is in any way related to a microcode update file.

Applicant has carefully reviewed Kopsaftis and cannot find any mention of a printer; instead, Kopsaftis mentions a peripheral device. (Kopsaftis, col. 15, lines 29-38). Kopsaftis does mention a special application program that does a peripheral device microcode update. (Kopsaftis, col. 15, lines 29-38). By contrast, the claimed invention does not require such a special application program, which is one of the advantages of the claimed invention over the prior art. This kind of prior art is described in the background of Applicant's specification:

In most cases, the operating system of the computer controlling the printer controls all access to the printer and only provides a user with operations related to the function of the device, for example, printing. In this example, the computer would provide no facility to download anything other than print jobs to the printer. When the operating system permits no other access, a special application running under the operating system may be required to download new program code. Utilizing such an application involves obtaining the application, installing the application, and invoking the application in order to perform the installation. (Applicant's Specification, page 2, lines 5-12).

Furthermore, the specification states "It is a first object and advantage of this invention to provide a method and apparatus for downloading microcode to a device without requiring the use of specialized downloading hardware or application routines." The claimed microcode update file is in a normal printer data stream that the printer can already receive and that a user can already send without requiring a specific application program. Whereas Kopsaftis requires an "application program" with specific back-and-forth commands from the "peripheral device". (Kopsaftis, col. 15, lines 29-38). Because Kopsaftis requires a special application program and Bluethman does not disclose any microcode update file at all, Applicant traverses the rejection of claim 38. For the same reasons, Applicant traverses the rejection of claims 57 (original claim 20) and 70 (original claim 33), which correspond to claim 38.

In regard to claim 39 (original claim 2), Applicant has carefully reviewed Figure 2 in Kopsaftis and cannot see how the header shows the presence of microcode. Claim 39 recites, *inter alia*, "interrogating a file header of said print job file wherein a presence of said microcode update file in said print job file is indicated by a bit pattern." The claimed invention has a different header than Kopsaftis and Bluethman does not disclose any such header. Therefore, Applicant traverses the rejection of claim 39. For the same reasons, Applicant traverses the rejection of claim 58 (original claim 21), which corresponds to claim 39.

In regard to claim 40 (the first original claim 3), Kopsaftis discloses a general data block, not a print job file. (Kopsaftis, Figure 2). By contrast, claim 40 recites, *inter alia*, "said bit pattern is located within a header portion of said print job file." Therefore, Applicant traverses the rejection of claim 40.

In regard to claims 41-43 (the second original claim 3 and original claims 4 and 5, referred to in the Office Action as claims 4-6), claims 41-43 depend from claim 38 and, thus, inherit the patentable subject matter of claim 38. Therefore, Applicant traverses the rejection of claims 41-43. For the same reasons, Applicant traverses the rejection of claim 71 (original claim 34), which corresponds to claim 43.

In regard to claim 44 (original claim 6, referred to in the Office Action as claim 7), it has nothing to do with returning control to the previous program as in Kopsaftis. It is actually transferring execution to the new microcode, not the previous program. Claim 44 recites, *inter alia*, "after said step of writing, the step of transferring execution to said executable program." Kopsaftis requires the processor to restart, while claim 44 does not. (Kopsaftis, col. 10, lines 37-40). Claim 44 differs from Kopsaftis in that microcode is transferred to the processor and executed immediately without restarting the processor. Thus, claim 44 has an advantage over Kopsaftis in operating so as not to require a restart. Therefore, Applicant traverses the rejection of claim 44. For the same reasons, Applicant traverses the rejection of claim 72 (original claim 35), which corresponds to claim 44.

In regard to claim 46 (original claim 8, referred to in the Office Action as claim 9), which recites, *inter alia*, "wherein said step of transferring comprises loading said executable program as a next task to be performed while another task is in process", claim 46 does not refer to any execution queue. The claimed invention is bringing in brand new microcode in the printer job file and allowing it to execute immediately and then further process the receipt of the rest of the printer job. When the microcode is received from that printer job file, the microcode instructions are executed. Claim 45 depends indirectly from claim 43, which recites, *inter alia*, "wherein said microcode update file includes an executable program". At this point, the processor of the claimed invention is not just executing a different piece of code, but executing microcode that came in on that printer job file, even before the rest of the printer job stream has been received by the printer. It is a single job. The processor executes different code on a self-modifying printer job to, for example, download the rest of it differently. This is completely different from an execution queue that just allows different microcode to run at a different time. Therefore, Applicant traverses the rejection of claim 46.

In regard to claims 47-49 (original claims 9-11, referred to in the Office Action as claims 10-12), because claims 47 and 48 depend indirectly from claim 38 and, thus, inherits the patentable subject matter of claim 38, Applicant traverses the rejection of

claims 47 and 48. For the same reasons, Applicant traverses the rejection of claims 63 and 74 (original claims 26 and 37), which corresponds to claim 48.

In regard to claims 50, 52, 59, and 60 (original claims 13, 15, 22, and 23), claims 50, 52, 59, and 60 depend indirectly from claim 38 and, thus, inherit the patentable subject matter of claim 38. Therefore, Applicant traverses the rejection of claims 50, 52, 59, and 60. For the same reasons, Applicant traverses the rejection of claim 65 (original claim 28), which corresponds to claim 52.

The Office Action rejected claim 8 under 35 U.S.C. §103(a) as being unpatentable over Bluethman in view of Kopsaftis and further in view of U.S. Patent No. 5,206,735 to Gauronski et al. ("Gauronski").

Applicant traverses the rejection of claim 45 (original claim 8), because the combination of Bluethman, Kopsaftis, and Gauronski does not teach each and every element. Claim 45 recites, *inter alia*, "said executable program returns execution to a previously running program." Claim 45 depends indirectly from claim 43 which recites, *inter alia*, "wherein said microcode update file includes an executable program." Thus, the executable program is in the microcode update file. Furthermore, claim 45 depends indirectly from claim 38 which recites, *inter alia*, "embedding a microcode update file as a module in a print job file." Thus, the executable program is in the microcode update file, which is in a print job file. Gauronski discloses resuming a print job after an interrupt job. (Gauronski, col. 7, lines 38-46). Gauronski is directed to resuming execution of a print job rather than the claimed returning execution to a previously executing microcode in a processor, which is completely different. Applicant has carefully reviewed Bluethman and Kopsaftis and cannot find this element. Therefore, Applicant traverses the rejection of claim 8. For the same reasons, Applicant traverses the rejection of claims 62 and 73 (original claims 25 and 36), which corresponds to claim 45.

The Office Action rejected claim 14 under 35 U.S.C. §103(a) as being unpatentable over Bluethman in view of Kopsaftis and further in view of U.S. Patent No. 4,868,866 to Williams, Jr. ("Williams").

Applicant traverses the rejection of claim 51 (original claim 14), because the combination of Bluethman, Kopsaftis, and Williams does not teach each and every element. As shown above, Bluethman and Kopsaftis do not teach each and every element of claim 38. Applicant has carefully reviewed Williams and cannot find the subject matter of claim 38. Claim 51 depends indirectly from claim 38 and inherits the patentable subject matter of claim 38. Therefore, claim 51 is also patentable over the combination of Bluethman, Kopsaftis, and Williams. For the same reasons, Applicant traverses the rejection of claim 64 (original claim 27), which corresponds to claim 51.

The Office Action rejected claim 24 under 35 U.S.C. §103(a) as being unpatentable over Bluethman in view of Kopsaftis and further in view of U.S. Patent No. 4,174,536 to Misunas et al. ("Misunas").

Applicant traverses the rejection of claim 61 (original claim 24) because claim 61 indirectly depends from claim 20 and, thus, inherits the patentable subject matter of claim 20. Therefore, claim 61 is also patentable over Bluethman and Kopsaftis. Applicant has carefully reviewed Misunas and cannot find the subject matter of claim 20. Therefore, claim 61 is also patentable over the combination of Bluethman, Kopsaftis, and Misunas.

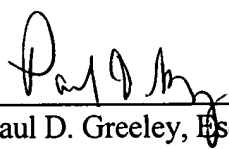
The Office Action objected to claims 16-19 and 29-32 as being dependent upon a rejected base claims but said they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant acknowledges the allowable subject matter of claims 16-19 and 29-32. Applicant believes the base claims are allowable as shown above and, thus, claims 53-56 and 66-69 (original claims 16-19 and 29-32) are also allowable.

In view of the foregoing, Applicant respectfully submits that all of the claims in the present application are patentably distinguishable over the references cited in the Office Action. Accordingly, Applicant respectfully requests that the claims be reconsidered and passed to allowance.

Respectfully submitted,

11-26-03
Date



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